NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

WATER-HARVESTING CATCHMENT

(No.)

CODE 636

DEFINITION

A facility for collecting and storing precipitation.

PURPOSE

To provide water for livestock, fish and wildlife recreation, or other purposes by sealing of the watersheds or contributing areas to increase, collect, and store runoff water for future use. It also applies to simple curbs and diversions constructed to collect and store runoff from such high runoff areas as rock outcrops or existing paved or impervious areas.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to areas where there is a need for additional water. The contributing area must have a potential to furnish the quantity and quality of water required for the intended use.

CRITERIA

All water-harvesting catchment designed under this standard shall comply with applicable federal, state, and local rules and regulations.

The design of diversions, sediment basins, water and sediment control basins, dams spillways and drainage or drawdown facilities shall be in accordance with the standard for diversion (362), sediment basin (350), water and sediment control basin (638), pond (378) as appropriate for the purpose of the structure being considered

Each water-harvesting catchment must be designed according to a plan suited to the water requirements and the site conditions.

The following points shall be evaluated in designing water-harvesting catchments:

1. Quality and quantity of water required for the planned use.
2. Probability of filling the storage area or basin.
3. Area of apron needed for the required water yield.
4. Materials and method required to insure that the apron is smooth and impervious. Earth, treated earth by non-organic soil additives or compaction, rubber, plastic, asphalt, concrete, steel, and other such suitable materials are acceptable for this purpose.
5. Provisions for diverting foreign runoff from the catchment area to prevent damage and excessive sedimentation.
6. Provisions for protecting the apron from damage by runoff in excess of that needed to maintain the design capacity of the conveyance system. An overflow pipe or an emergency spillway can be used.
7. Need for a sediment trap between the apron and the storage basin.
8. A storage basin that is adequate in size, impermeable, and durable for the required water. Earth basins and tanks of steel, concrete, butyl rubber and similar facilities are acceptable.
9. Need for evaporation repressants (reduce evaporation losses), such as rock filling and floating covers.
10. Adequate protection to prevent damage from weather, animals, vandals, wildlife, and traffic. Fencing may be necessary.

11. Provisions for maintaining the apron, the conveyance system, the overflow device, and the storage basin.

CONSIDERATIONS

Effects of the practice on surface and ground water. Factors include changes in evaporation, timing of releases from the catchment, and the impact of the type of catchment on surface water versus ground water.

PLANS AND SPECIFICATIONS

Specifications for installation and operation of this practice shall be prepared for each field or treatment unit according to the Criteria, Considerations, and Operation and Maintenance described in this standard.

OPERATION AND MAINTENANCE

An O&M plan specific to the type of installed water-harvesting catchment shall be provided to the landowner. The plan shall include, but not be limited to, the following provisions:

1. Inspecting and testing valves, pumps, and other appurtenances;
2. Maintaining erosion protection at outlets;
3. Checking for debris, minerals, algae and other materials which may restrict system flow;
4. Draining and/or providing for cold weather operation of the system;
5. Controlling all vegetation, wildlife, rodents, or burrowing animals from the apron; and
6. Maintaining all fences to prevent unauthorized human or livestock access.
7. Controlling noxious weeds and other undesirable weeds